



**Subject: IXYSRF strategy to follow the RoHS “Restriction of Hazardous Substances Directive” of the European Parliament and Counsel - Lead free**

The European Parliament and council, in January 27 of 2003, issued the Restriction of Hazardous Substances (RoHS) directive 2002/95/EC, which restricts certain hazardous substances in electrical and electronic products. Effective July 1, 2006, RoHS identified substances like lead (Pb) will be banned from electrical and electronic products sold in Europe.

IXYSRF supports our customers in their efforts to comply with the RoHS Directive and provides lead-free finish on all terminals of our devices far in advance to the legislative deadlines. **Here we want to point out that “lead-free” refers to the device terminals only; die attach materials inside the housings are still allowed by the RoHS Directive to contain high lead solder. A deadline was not set in this case.**

IXYSRF compliance with the RoHS directive is provide herein.

1.) Implementation and availability of “lead-free” components/ Time Schedule per package

Housing type	Conversion date
TO-247/TO-268	01 July 2004
PDIP/SOIC	01 July 2004
ISOPLUS devices like: ISOPLUS247 / 264	01 July 2004
TO-268	01 July 2004
SOT-227	Not affected
DE devices: DEIC__ / DE150 / 275 / 375 / 475 / 4DF	Pure Silver already
XOB series IXYS Solar Bits	Pure Gold already

For any other packages not listed above the customer is requested to ask IXYSRF customer service.

- 2.) No obsolescence is anticipated with the change to “lead-free”.
- 3.) No part number changes will occur with the transition to “lead-free”.
- 4.) Terminal finish will be pure tin: Sn100. In most cases there is no under-plated nickel. There is no plan to do an anneal of the tin finish.
- 5.) Recommended soldering process for “lead-free” SMT components is >240C for 15 seconds not to exceed 260C. Temperature ramps should use a preheat and should not exceed 0.6K/sec.
- 6.) All devices mentioned above will still contain lead inside the package as a high melting point solder with more than 85% lead or in a passivation glass on our bipolar dies. This use is not restricted under the RoHS directive.

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